

ABSTRACT

The present invention provides a process for preparing a fluorine-containing elastomer in a high productivity comparable to that of non-iodine transfer polymerization process by carrying out an iodine transfer polymerization at high pressure. The present invention also provides a fluorine-containing elastomer prepared by this process, and fluorine-containing molded articles. The process is a batch copolymerization process conducted under conditions that the reduced temperature of the critical constant is at least 0.95 and the reduced pressure of the critical constant is at least 0.80 wherein the reduced temperature and the reduced pressure are calculated using the Peng-Robinson formula from the critical temperature, the critical pressure and the composition ratio of each of the monomers in the gaseous phase in a reaction vessel,

in which ethylenically unsaturated compounds containing at least one fluorooolefine are copolymerized in the presence of a compound having the formula: $R_f^1 \cdot I_x$ wherein R_f^1 is a saturated or unsaturated fluorohydrocarbon or chlorofluorohydrocarbon group having 1 to 16 carbon atoms, and x is the number of bonds of R_f^1 and an integer of 1 to 4.